UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,545	01/27/2004	Ylian Saint-Hilaire	110349-133008	3084

25943   7590   10/17/2008
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EXAMINER
ARCOS, CAROLINE H

ART UNIT	PAPER NUMBER
2195	

MAIL DATE	DELIVERY MODE
10/17/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/766,545	SAINT-HILAIRE ET AL.
	Examiner	Art Unit
	CAROLINE ARCOS	2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _14 July 2008_.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-10 and 12-24_ is/are pending in the application.
     4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1-10 and 12-24_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on _27 January 2004_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
     a)☐ All   b)☐ Some * c)☐ None of:
       1.☐ Certified copies of the priority documents have been received.
       2.☐ Certified copies of the priority documents have been received in Application No. _____.
       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
       Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
       Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-10 and 12-24 are pending for examination.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3.   Claims 1-10 and 12-13 And 19-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

      a.   The claim language in the following claims is not clearly understood:

            i.   As per claim 1, lines 8-11; it is not clearly understood whether the first module is the one registering the first events of interest or the second module is the one registering the first event of interest. Lines 9-10, it is not clearly understood who is interested in the event? (i.e. first module or second module).

            ii.   As per claim 9, lines 9-11, it is not clearly understood which module is interested in the first event? (i.e. the first or the second module?)

            iii.   As per claim 19, it is not clearly understood which module is interested in the events (the one registering)? If the second module is the one interested in the event, with which module does the second module registering his event interest?

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

5.   Claims 14-15 and 22-23 are rejected under 35 U.S.C. 102(e) as being anticipated by

Gongwer et al. (US 7,155,701 B1)

6.   As per claim 14, Gongwer teaches a computing device comprising:

a processor (col. 2, line 50); and

a first plurality of executable instructions to be operated by the processor to provide a

thread module chaining service to facilitate dynamic logical chaining of a plurality of modules to

execute together as parts of a single thread and to share an execution context of the single thread,

and

maintain and annotate a thread control data structure with control data to enable

said logical chaining and orchestrated execution of the modules as parts of the single thread (col.

1, lines 58-60; col. 2, lines 50-56;col. 3, lines 33-67; col. 4, lines 13-16; col. 6, lines 5-10) .

7.   As per claim 15, Gongwer teaches the first plurality of executable instructions are further

provide the thread module chaining service to annotate the thread control data structure with

control data of a module to be logically chained to be a part of the single thread (col. 1, lines 58-

60; col. 3, lines 33-67; col. 4, lines 13-16; col. 6, lines 5-10).

8.   As per claim 22, Gongwer teaches an article of manufacture comprising:

a computer readable medium; and

a plurality of executable instructions designed to implement a thread module chaining service to

facilitate dynamic logical chaining of a plurality of modules to execute together as parts of a

single thread and to share an execution context of the single thread, and

maintain and annotate a thread control data structure with control data to enable said

Logical chaining and orchestrated execution of the modules as parts of the single thread. (col. 1,

lines 32-48; col. 1, lines 58-62; col. 3, lines 6-11; col. 3, lines 33-50; col. 4, lines 14-16; col. 4,

lines 56-67; col. 5, lines 1-6; col. 6, lines 5-28).

9.   As per claim 23, Gongwer teaches wherein the plurality of executable instructions are

further designed to annotate the thread control data structure with control data about a module to

be logically chained to be a part of the single thread, when dynamically invoked to logically

chain the module to be the part of the single thread(col. 1, lines 32-48; col. 1, lines 58-62; col. 3,

lines 6-11; col. 3, lines 33-50; col. 4, lines 14-16; col. 4, lines 56-67; col. 5, lines 1-6; col. 6, lines

5-28).

Claim Rejections - 35 USC § 103

10.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
such that the subject matter as a whole would have been obvious at the time the invention was made to a person
having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
manner in which the invention was made.

11.   Claims 1-10 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Wollrath et al. (US 6,463,446 B1), in view of Gongwer et al. (US 7,155,701 B1).

12.   As per claim 1, Wollrath teaches the invention substantially as claimed including a

method comprising:

        second causing, by the first module, the second module to register first events of interest

to the second module with an event notification service (col. 3, lines 36-44; col. 3, lines 55-61);

        waiting, by the first module, for notification of occurrence of one or more of the first

events (col. 3, lines 44-47; col. 3, lines 61-64); and

        third causing, by the first module, the second module to process an occurred one of the

first events (abs., lines 3-9; col. 3, lines 47-48).

13.   Wollrath doesn't explicitly teach first causing, by a first module, a second module to be

logically chained to the first module to form or expand a thread comprised of modules, the

modules of the thread including at least the first and second modules, enabling the first and

second modules to be executed as part of the thread and to share an execution context of the

thread.

14.   However, Gongwer teaches a first module, a second module to be logically chained to the

first module to form or expand a thread comprised of modules, the modules of the thread

including at least the first and second modules, enabling the first and second modules to be

executed as part of the thread and to share an execution context of the thread (abs., lines 3-8; col.

1, lines 32-34; col. 4, lines 13-16).

15.   It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine Wollrath and Gongwer because Gongwer teaching of chaining first and

second module would improve Wollrath system by executing more efficiently in one context of

execution.

16.   As per claim 2, Gongwer teaches that wherein the first causing further includes invoking

a thread module chaining service, the thread module chaining service having a control data

structure of the thread to logically associate the second module with the first module, the control

data structure including a first pointer to a first set of executable instructions of the second

module designed to register the first events (col. 3, lines 5-9; col.3, lines 45-50; col. 4, lines 56-

61).

17.   Gongwer doesn't explicitly teach to register the first events with the event notification

service.

18.   However, Wollrath teaches to register the first events with the event notification service.

(abs., lines 1-9; col. 1, lines 35-64).

19.   As per claim 3, Gongwer teaches wherein the second causing further includes invoking

the thread module chaining service to orchestrate registration of events of interest to Logically

chained modules of the thread, the thread module chaining service retrieving the first pointer to

the first set of executable instructions, and causing the first set of executable instructions to be

executed, using the first pointer to locate the first set of executable instructions (col. 1, lines 58-

62; col. 3, lines 55-67; col. 4, lines 1-16).

20.   Gongwer doesn't explicitly teach orchestrate registration of events of interest with the

event notification service. However, Wollrath teaches orchestrate registration of events of

interest with the event notification service (abs., lines 1-9; col. 1, lines 35-64).

21.   As per claim 4, Gongwer teaches the control data structure further includes a second

.pointer to a second set of executable instructions designed to process the occurred one of the

first events (col.3, lines 45-67).

22.   As per claim 5, Wollrath teaches wherein the third causing further comprises invoking

the thread module chaining service to orchestrate processing of the occurred event by the

logically chained modules of the thread (abs., lines 3-9; col. 3, lines 36-48; col. 3, lines 55-61).

23.   Wollrath doesn't explicitly teach the thread module chaining service retrieving the second

pointer to the second set of executable instructions, and causing the second set of executable

instructions to be executed, using the second pointer to locate the second set of executable

instructions.

24.   However, Gongwer teaches retrieving the second pointer to the second set of executable

instructions, and causing the second set of executable instructions to be executed, using the

second pointer to locate the second set of executable instructions (col. 1, lines 57-62; col.3, lines

45-67).

25.   As per claim 6, Gongwer teaches detecting, by the first module, for a thread termination

condition; and fourth causing by the first module the thread to be terminated after detecting the

thread termination condition (fig. 5, elements 58, 59; col. 4, lines 54-67; col. 5, lines 1-6; col. 5,

lines 44-48; col.6, lines 20-28).

26.   As per claim 7, Gongwer teaches the fourth causing further comprises invoking the

thread module chaining service to orchestrate thread termination clean up by the logically,

chained modules of the thread, the thread module chaining service retrieving the a third pointer,

stored in the control data structure, to a third set of executable instructions of the second module,

the third set of executable instructions designed to perform termination clean up for the second

module, and causing the third set of executable instructions to be executed, using the third

pointer to locate the third set of executable instructions (fig. 5, elements 58, 59; col. 1, lines 57-

62; col. 3, lines 33-59; col. 4, lines 54-67; col. 5, lines 1-6; col. 5, lines 44-48; col.6, lines 20-28).

27.   As per claim 8, Gongwer teaches fourth causing, by the first module, a third module to be

logically chained to the first and second modules to expand the thread, enabling the first, second

and third modules to be executed as part of the thread and to share an execution context of the

thread (col. 1, lines 49-62; col. 3, lines 32-41; col. 4, lines 8-16).

28.   As per claim 9, Wollrath teaches a method comprising:

           waiting, by the first module, for notification of occurrence of one or more of first

events of interest to the second module(col. 3, lines 44-47; col. 3, lines 61-64);

           second causing, by the first module, the second module to process an occurred one of the

first events (abs., lines 3-9; col. 3, lines 47-48);

29.   Wollrath doesn't explicitly teach first causing, by a first module, a second module to be

logically chained to the first module to form or expand a thread comprised of modules, the

modules of the thread including at least the first and second modules, enabling the first and

second modules to be executed as part of the thread and to share an execution context of the

thread, enabling the second module to be executed as part of the same thread.

           detecting, by the first module, for a thread termination condition; and

           third causing, by the first module, the thread to be terminated after detecting the thread

termination condition.

30.   However, Gongwer teaches first causing, by a first module, a second module to be

logically chained to the first module to form or expand a thread comprised of modules, the

modules of the thread including at least the first and second modules, enabling the first and

second modules to be executed as part of the thread and to share an execution context of the

thread, enabling the second module to be executed as part of the same thread (abs., lines 3-8; col.

1, lines 32-34; col. 4, lines 13-16; col. 6, lines 5-10);

 detecting, by the first module, for a thread termination condition; and

 third causing, by the first module, the thread to be terminated after detecting the thread

termination condition(fig. 5, elements 58, 59; col. 1, lines 57-62; col. 3, lines 33-59; col. 4, lines

54-67; col. 5, lines 1-6; col. 5, lines 44-48; col.6, lines 20-28).

31. Wollrath doesn't explicitly teach first causing, by a first module, a second module to be

logically chained to the first module to form or expand a thread comprised of modules, the

modules of the thread including at least the first and second modules, enabling the first and

second modules to be executed as part of the thread and to share an execution context of the

thread.

32. As per claim 10, Gongwer teaches wherein said second causing further comprises

invoking a thread module chaining service to orchestrate processing of the occurred event by

Logically chained modules of the thread, the thread module chaining service retrieving a first

pointer to a first set of executable instructions of the second module from a control data

structure, the first set of executable instructions designed to process the occurred one of the first

events, and causing the first set of executable instructions to be executed, .Using the first pointer

to locate the first set of executable instructions (col. 1, lines 58-62; col. 3, lines 5-9; col. 3, lines

45-67; col. 4, lines 1-16; col. 4, lines 56-61).

33.   As per claim 12, Gongwer teaches wherein the third causing further comprises invoking a

thread module chaining service to orchestrate thread termination clean up by logically chained

modules of the thread, the thread module chaining service retrieving a first pointer to a first set of

executable instructions of the second module from a control data structure, the first set of

executable instructions designed to perform termination clean up for the second module and

causing the first set of executable instructions to be executed, using the first pointer to locate the

second set of executable instructions(fig. 5, elements 58, 59; col. 1, lines 57-62; col. 3, lines 33-

59; col. 4, lines 54-67; col. 5, lines 1-6; col. 5, lines 44-48; col.6, lines 20-28).

34.   As per claim 13, Gongwer teaches fourth causing, by the first module, a third module to

be logically chained to the first and second modules to expand the thread, enabling the first,

second, and third modules to be executed as part of the thread and to share an execution context

of the thread (abs., lines 3-8; col. 1, lines 32-34; col. 4, lines 13-16; col. 6, lines 5-10).

35.   Claims 16-17, 19-20 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Gongwer et al. (US 7,155,701 B1) in view of Wollrath et al. (US 6,463,446 B1).

36.   As per claim 16, Gongwer teaches wherein the control data includes at least a selected

one of a pointer of the module pointing to a plurality of executable instructions of the module to

register events of interest to the module of the computing device,

a pointer of the module pointing to a plurality of executable instructions of the module to

process an occurred event of interest to the module(col. 3, lines 5-9; col.3, lines 45-50; col. 4,

lines 56-61), and

a pointer of the module pointing to a plurality of executable instructions of the module to

perform thread termination clean up for the module(fig. 5, elements 58, 59; col. 1, lines 57-62;

col. 3, lines 33-59; col. 4, lines 54-67; col. 5, lines 1-6; col. 5, lines 44-48; col.6, lines 20-28).

37.   Gongwer doesn't explicitly teach the control data includes at least a selected one of a

pointer of the module pointing to a plurality of executable instructions of the module to register

events of interest to the module with an event notification service.

38.   However, Wollrath teaches the control data includes at least a selected one of a pointer of

the module pointing to a plurality of executable instructions of the module to register events of

interest to the module with an event notification service (abs., lines 1-9; col. 1, lines 35-64).

39.   It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine Gongwer and Wollrath because Wollrath teaching of event notification

service would improve Gongwer system performance by improving the inter-module

communication and having a notification upon the event of interest occurrence, one will fine

tune the system based on the event.

40.   As per claim 17, Gongwer teaches wherein the first plurality executable instructions are

further provide the thread module chaining service to orchestrate registration of events of interest

to the logically chained modules, and

        Orchestrate thread termination clean up of the logically chained modules by the logically

chained modules (abs., lines 3-10; fig. 5, elements 58, 59; col. 1, lines 57-62; col. 3, lines 33-59;

col. 4, lines 54-67; col. 5, lines 1-6; col. 5, lines 44-48; col.6, lines 20-28).

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41.   Gongwer doesn't explicitly teach orchestrate registration of events of interest to the

logically chained modules with an event notification service, and Orchestrate processing of an

occurred event of interest by one or more of the logically chained modules

42.   However, Wollrath teaches orchestrate registration of events of interest to the logically

chained modules with an event notification service and Orchestrate processing of an occurred

event of interest by one or more of the logically chained modules(abs., lines 1-9; col. 1, lines 35-

64).

43.   It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine Gongwer and Wollrath because Wollrath teaching of event notification

service would improve Gongwer system performance by improving the inter-module

communication and having a notification upon the event of interest occurrence, one will fine

tune the system based on the event.

44.   As per claim 19, Gongwer teaches a computing device comprising:

a processor (col. 2, lines 50-51);

a first module to be operated by the processor to cause a second module to be logically

chained to the first module to form or expand a thread comprised of modules, the modules of the

thread including at least the first and second modules, enabling the first and second modules to

be executed as part of the thread and to share an execution context of the thread; and

the second module to be operated by the processor, the second module having at least a

selected one of a first set of executable instructions to register events of interest to the second

module, and a third set of executable instructions to perform clean up during thread termination

(col. 1, lines 32-48; col. 1, lines 58-62; col. 3, lines 6-11; col. 3, lines 33-50; col. 4, lines 14-16;

col. 4, lines 56-67; col. 5, lines 1-6; col. 6, lines 5-28).

45.   Gongwer doesn't explicitly teach a second set of executable instructions to process an

occurred one of the events of interest.

46.   However, Wollrath teaches a second set of executable instructions to process an occurred

one of the events of interest (abs., lines 3-9; col. 3, lines 47-48).

47.   It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine Gongwer and Wollrath because Wollrath teaching of processing an

occurred one of the events of interest would improve Gongwer system and facilitate the

processing of the events.

48.   As per claim 20, Gongwer teaches wherein the second module further includes at least a

corresponding one of a first pointer, a second pointer, and a third pointer pointing to the first set,

the second set, and the third set of executable instructions respectively (col. 1, lines 32-48; col. 1,

lines 58-62; col. 3, lines 6-11; col. 3, lines 33-50; col. 4, lines 14-16; col. 4, lines 56-67; col. 5,

lines 1-6; col. 6, lines 5-28).

49.   As per claim 24, Gongwer teaches wherein the first plurality of executable instructions

further provide the thread module chaining service with at least a selected one of an ability to

orchestrate registration of events of interest to the logically chained modules with an event

notification service by the logically chained modules,

        an ability to orchestrate processing of an occurred event of interest by one or more of the

logically chained modules, and

        an ability to orchestrate thread termination clean up of the logically chained modules by

the respective logically chained modules (col. 1, lines 32-48; col. 1, lines 58-62; col. 3, lines 6-

11; col. 3, lines 33-50; col. 4, lines 14-16; col. 4, lines 56-67; col. 5, lines 1-6; col. 6, lines 5-28).

50.   Gongwer doesn't explicitly teach the first plurality of executable instructions further

provide the thread module chaining service with at least a selected one of an ability to orchestrate

registration of events of interest to the logically chained modules with an event notification

service by the logically chained modules.

51.   However, Wollrath teaches the first plurality of executable instructions further provide

the thread module chaining service with at least a selected one of an ability to orchestrate

registration of events of interest to the logically chained modules with an event notification

service by the logically chained modules (abs., lines 1-9; col. 1, lines 35-64).

52.   It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine Gongwer and Wollrath because Wollrath teaching of event notification

service would improve Gongwer system performance by improving the inter-module

communication and having a notification upon the event of interest occurrence, one will fine

tune the system based on the event.

53.   Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gongwer et al.

(US 7,155,701 B1), in view of UPNP ("UPNP AV architecture: 0.83", UPNP forum, Version

1.0, 2002, pages 1-22).

54.   As per claim 18, Gongwer doesn't explicitly teach wherein the computing device

comprises a UPNP control point. However, UPNP teaches the computing device comprises a

UPNP control point. (Fig. 1; Fig. 2; pg. 4, lines 5-9).

55.   It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine Gongwer and UPNP because UPNP include a UPNP control

point would improve and simplify the implementation of networks in the home (data sharing,

communications, and entertainment) and corporate environments. It allows peripheral devices to

discover and connect to other devices and to enumerate the characteristics of those devices.

56.   Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gongwer et al.

(US 7,155,701 B1) in view of Wollrath et al. (US 6,463,446 B1) as applied to claims 14 and 19

above and further in view of UPNP ("UPNP AV architecture: 0.83", UPNP forum, Version 1.0,

2002, pages 1-22).

57.   As per claim 21, the combined teaching of Gongwer, Wollrath and UPNP because UPNP

include a UPNP control point would improve and simplify the implementation of networks in the

home (data sharing, communications, and entertainment) and corporate environments. It allows

peripheral devices to discover and connect to other devices and to enumerate the characteristics

of those devices.

Response to Arguments

58.   Applicant's arguments with respect to claims1-8, 9-10 and 12-24 have been considered

but are moot in view of the new ground(s) of rejection.

Conclusion

59.		The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

(US 20040154024 A1) teaches Component based user self-definition event mechanism.

(US 6763472 B2) teaches System and method for accessing information made available by a

kernel mode driver.

(US 6424354 B1) teaches Object-oriented event notification system with listener registration of

both interests and methods.

(US 20050125808 A1) teaches Object-oriented callback systems and methods.

(US 6691147 B1) teaches Method and apparatus supporting network communications.

60.		Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

61.		A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

62.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to CAROLINE ARCOS whose telephone number is (571)270-3151.

The examiner can normally be reached on Monday-Thursday 7:00 AM to 5:30 PM.

63.   If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

64.   Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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